

BLACKBURN CARTER

A Professional Corporation - Lawyers

4709 Austin Street, Houston, Texas 77004
Telephone (713) 524-1012 ♦ Telefax (713) 524-5165

www.blackburncarter.com

JAMES B. BLACKBURN, JR.

MARY W. CARTER

CHARLES W. IRVINE

ADAM M. FRIEDMAN

MARY B. CONNER

KRISTI J. DENNEY

VELIA ANDAVERDE

Sender's E-Mail: velia@blackburncarter.com

March 29, 2011

Via Federal Express

LaDonna Castañuela, Chief Clerk
Office of the Chief Clerk - MC 105
Texas Commission on Environmental Quality
12100 Park 35 Circle
Austin, Texas 78753

RE: SOAH Docket No. 582-09-3064; TCEQ Docket No. 2008-1888-UIC; *Application of Uranium Energy Corp of Permit No. UR03075 and for Aquifer Exemption in Goliad County, Texas*

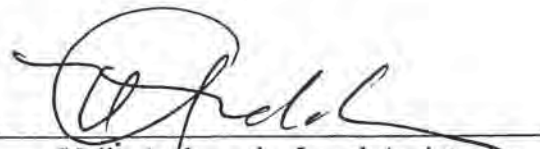
Dear Ms. Castañuela:

Pursuant to the March 9, 2011 TCEQ notice of decision, enclosed is the original and seven copies of Protestant *Goliad County's Motion for Rehearing*. The enclosed document will also have been filed electronically via the TCEQ's e-Filing System with a courtesy copy forwarded to Judge Wilfong by e-mail.

Should you have any questions regarding the enclosed filing, please feel free to contact me at (713) 524-1012. Thank you for your assistance with this filing.

Sincerely,

BLACKBURN CARTER, P.C.

by 
Velia Andaverde, Legal Assistant

c: See Certificate of Service
Attached to Filing

SOAH DOCKET NO. 582-09-3064 and TCEQ DOCKET NO. 2008-1888-UIC
consolidated with
SOAH DOCKET NO. 582-09-6184 and TCEQ DOCKET NO. 2009-1319-UIC

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| APPLICATION OF URANIUM ENERGY | § | |
| CORP. FOR PERMIT NO. UR 03075 AND | § | BEFORE THE |
| FOR AQUIFER EXEMPTION AND FOR | § | STATE OFFICE OF |
| PRODUCTION AREA AUTHORIZATION UR | § | ADMINISTRATIVE HEARINGS |
| 03075 PAA1 IN GOLIAD COUNTY, TEXAS | § | |

GOLIAD COUNTY'S MOTION FOR REHEARING

JAMES B. BLACKBURN, JR.
TBN 02388500
MARY W. CARTER
TBN 03926300
ADAM M. FRIEDMAN
TBN 24059783
BLACKBURN CARTER, P.C.
4709 Austin Street
Houston, Texas 77004
713/524-1012
713/524-5165 (*fax*)

FOR PROTESTANT GOLIAD COUNTY, TEXAS

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| CORP. FOR PERMIT NO. UR 03075 AND | § | STATE OFFICE OF |
| FOR AQUIFER EXEMPTION IN GOLIAD | § | ADMINISTRATIVE HEARINGS |
| COUNTY, TEXAS | § | |

GOLIAD COUNTY'S MOTION FOR REHEARING

COMES NOW Goliad County ("Protestant") and pursuant to 30 T.A.C. § 80.272, respectfully files this Motion for Rehearing in the above-referenced proceeding. On March 7, 2011, Texas Commission on Environmental Quality (the "Commission" or "TCEQ") signed, and on March 9, 2011, the Commission mailed, an Order Approving the Applications of Uranium Energy Corp ("UEC") for Issuance of a Class III Injection Well Permit No. UR03075, Aquifer Exemption Order and Production Area Authorization No.1 in Goliad County, Texas. For the reasons identified below, Goliad County requests that the Commission grant this Motion for Rehearing, and thus reopen the above-referenced matter for additional consideration, enabling the Commission to address prior determinations that are not supported by the great weight of the evidentiary record in this proceeding and that are contrary to applicable law and policy, as set out in its Order. In support thereof, Goliad County shows the following:

I. INTRODUCTION

The Texas Commission on Environmental Quality ("TCEQ") designated twenty-one issues to be addressed at the contested hearing before the State Office of Administrative Hearings ("SOAH") regarding the class III injection well permit application. Upon conclusion of the evidence presented at hearing, the ALJ determined the Applicant failed to meet its burden on at least *five* of the issues. All five of the ALJ's findings stem from the failure of the Applicant

to adequately characterize, and the remaining uncertainty, of the transmissivity of the Northwest Fault.

The entirety of UEC's Mine Application and testimony regarding the protection of groundwater was premised on the sealing nature of the Northwest Fault. However, as the ALJ points out in his PFD, the staff engineer for the Executive Director ("ED"), David Murry, testified that the Northwest Fault is actually transmissive.¹ Without an adequate description of the Northwest Fault, UEC cannot accurately represent that the mining fluids and/or contaminants will not migrate laterally and/or vertically across the fault, potentially contaminating groundwater. Similarly, UEC also cannot know whether an adequate monitor well system that complies with the TCEQ requirements is even feasible or economically possible for mining 75% of the entire mineral deposits identified by UEC.² Mr. Underdown, UEC's Vice President of Production, testified that, due to this uncertainty, sands A, C and D may have to be partially excluded from mining,³ and if so, it is possible the entirety of all three sands will no longer be commercially minable.⁴ UEC is cognizant of these uncertainties (as was exposed by the admission that UEC has not yet made an internal decision how it is going to actually mine the areas straddling the Northwest Fault),⁵ and these uncertainties directly impact the viability of the permit application.

ALJ Wilfong explained in his Proposal for Decision ("PFD") that, based on the evidence presented at hearing, "until the issue of the transmissivity of the Northwest Fault is resolved, ... the [Mine Permit] application may not be sufficiently protective of groundwater quality."⁶

¹ PFD at 55 – 56.

² UEC Exhibit 6, Holmes Pre-filed Direct at Exhibit 3.

³ *Id.* 199:9 – 20 (Underdown)(referring to Goliad County Exhibit 1, Clark Pre-filed at Exhibit 13)("Exclusion Map").

⁴ *Id.* 201:25 – 203:5 (Underdown).

⁵ 1 TR. 199:6 – 202:17 (Underdown).

⁶ PFD at 45.

Protestants maintain that ALJ Wilfong correctly concluded he could not recommend issuing the mine permit because, “[b]efore the Commission may authorize a mining operation by injection of pollutants into an aquifer, the law requires that the Commission review all of the information available to ensure that the use or installation of an injection well is in the public interest and that, with proper safeguards, both ground and surface fresh water can be adequately protected from pollution.”⁷

However, the Commission disregarded the ALJ’s recommendations and, despite the Applicant’s failure to prove that groundwater will be protected, proceeded to issue both the Class III Injection Well Permit No. UR03075 (“Mine Permit”) and Production Area Authorization No.1 located in the B sand (“PAA-1 or “PAA-B”). In doing so, the Commission violated Chapter 27 of the Texas Well Injection Act, which, as alluded to above, explicitly states, “the Commission may grant an application in whole or part and may issue the permit *if it finds that, with proper safeguards, both ground and surface fresh water can be adequately protected from pollution.*”⁸

Goliad County’s opposition led to other crucial discoveries of the inadequacies in UEC’s application—inadequacies that would have otherwise gone undetected. For example, it was discovered at hearing that (in addition to the critical evidence related to groundwater flow through the Northwest Fault), key evidence related to background water quality was never submitted to the TCEQ as part of UEC’s application process. Evidence presented at hearing revealed a serious disparity in data collected to describe the “baseline” water quality at the site – a level that is critical for remediation and groundwater protection purposes. The Commission – based on data developed by UEC but never submitted to the TCEQ prior to Goliad County’s

⁷ PFD at 52.

⁸ TEX. WATER CODE § 27.051(a)(3) (emphasis added).

expert testimony – adopted the recommendation of the ALJ that the remediation table be amended to include these additional test values. At the least, this should be done. However, averaging the rounds of sampling together is insufficient to address the issue that the first two rounds of samples were artificially elevated by UEC’s exploration and well development.

Moreover, it was revealed during the deposition of a key witness for UEC, Mr. Craig Holmes, that he had substantial stock options and a direct financial stake in the outcome of the SOAH hearing. At the pre-hearing conference on the Friday before the commencement of the hearing on the following Monday, ALJ Wilfong expressed concern about this financial arrangement. It was not until ALJ Wilfong expressed such concern that Mr. Holmes decided to take action and allegedly liquidate all of his stock options, which he did over the weekend prior to the start of the contested case hearing. This, of course, does not change that his pre-filed testimony was written and key evidence was withheld from the commission while he owned the substantial stock options.

Ownership of substantial stock options by Mr. Holmes gave him a direct monetary interest in the issuance of these permits. Such an arrangement certainly questions the reliability and veracity of the key witness offered by UEC that also drafted the vast majority of the applications. Perhaps more importantly, he was the primary interface between the TCEQ staff and UEC. This means he had the transmissivity and water quality information that is contrary to the representations in the permit applications, yet he and UEC failed to file it with the TCEQ staff.

Finally, for additional important reasons that the Commission inappropriately dismissed, Goliad County respectfully requests that the Commission reopen the record and reconsider its previous findings with regard to the approval of UEC’s permit applications. Specifically, Goliad

County takes exception with the Commission's Order with regard to a number of issues that were designated by the Commission, including public interest considerations, aquifer exemption criteria and baseline conditions of the groundwater in the proposed mining permit. The appropriate time, both legally and practically, to determine the characteristics of the Northwest Fault was in the contested case hearing - *before* issuing the permit and *before* injection begins.

II. RULES VIOLATIONS

There are several key rules that were violated by UEC during the course of this hearing that raise question regarding the Commission's ultimate issuance of the permits. One of these rules concerns the burden of proof. It is undisputed that UEC has the burden of proof in this hearing. According to 30 T.A.C. § 80.17(a):

“the burden of proof is on the moving party by a preponderance of the evidence, except as provided in subsections (b) - (d) of this section [which do not apply to these uranium mining applications].”

This is the law applicable to this case and it is clear from Judge Wilfong's PFD that, in his opinion as the trier of facts, UEC did not meet its burden.

Additional rule violations concern the Applicant's withholding information from the Commission - information germane to the truth of assertions in the application that shed light on the applicant's failure to properly characterize the geology and baseline water quality within the proposed mining boundary.

30 T.A.C. § 305.125(19) states the following:

“Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application, or in any report to the executive director, it shall promptly submit such facts and information.”

It is clear from the hearing that UEC violated that requirement in not one, but in at least two specific situations. The first involved the failure to submit the 24-hour fault pump test that led to the ALJ's concern about leakage through the fault. In this regard, Mr. Murry testified that:

Q. (by Mr. Blackburn) Now – Again, does the Applicant have the option of withholding information and not seeking an amendment if that information is contrary to other representations the Applicant is making?

A. (by Mr. Murry) Based on the rule we've read, if they come across information that is contrary to what they submit in the application, they are obligated to tell us.

Q. Was such a communication received by TCEQ from UEC in this regard?

A. Not to me.⁹

This same situation occurred with regard to the additional test data that showed significantly lower levels of uranium in the baseline samples from rounds 2 and 3 of sampling than was the case in earlier sampling. Once again, UEC failed to formally submit such data to the TCEQ even though it was contrary to prior representations made by the applicant:

Q. (by Mr. Blackburn). Now, to your knowledge, is the Applicant under any obligation to bring information forward to the TCEQ that is contrary to representations made at an earlier time?

A. (by Mr. Murry). I would say "Yes".

Q. But the Applicant did not bring this information about Round 3 testing to your attention, correct?

A. No. Again, it was --- we found it in the discovery documents.¹⁰

UEC had evidence in its possession for the vast majority of the permitting process that was directly counter to the suggestion in its application that the Northwest Fault was sealing. UEC's actions underscore the skepticism that already exists with regard to whether the minerals straddling or adjacent to the Northwest Fault can even be mined in compliance with TCEQ rules.

⁹ 7 TR. 1342:15 – 25 (Murry).

¹⁰ 7 TR. 1313:12 – 21 (Murry).

III. NORTHWEST FAULT IMPROPERLY CHARACTERIZED (Issue G)

Goliad County strongly urges that the issues associated with the Northwest Fault—its transmissivity, and the unanswered questions surrounding the complexity of the fault system and the groundwater flow—warrant denial of the permit applications. The ALJ was justifiably concerned about groundwater contamination moving towards and beyond the fault both vertically and horizontally. To that end, the ALJ expressed that the Commission’s rules are designed to “*prevent* any underground injection that *may pollute* fresh water”,¹¹ and that circumstances causing pollution would be grounds for permit denial. Goliad County urges that these mandates should be followed.

The plain language of TEX. WATER CODE 27.051(a)(3) establishes that before evaluating whether the proposed Mining Permit is in the public interest and sufficiently protective of groundwater quality, the Commission must evaluate the feasibility of the entire project - not just one piece that makes up only 25%¹² of the mineral deposits proposed for mining. UEC argues, and the Commission acquiesced, that UEC will eventually figure out how to mine around the Northwest Fault if and when they apply for subsequent PAAs, which will include additional pump tests prior to obtaining PAA-2, PAA-3 and PAA-4. Although UEC may be correct that additional pump tests will be required, UEC is incorrect that these future obligations relieve them of their burden to ensure protection of groundwater prior to obtaining the entire, larger Mine Permit.

A. The Northwest Fault is transmissive, not sealed.

Although UEC represented that the fault was sealed, this representation turned out to be false. Evidence adduced at hearing indicated that the Northwest Fault is transmissive. At best,

¹¹ PFD at 56 (emphasis in PFD).

¹² UEC Exhibit 6, Holmes Pre-filed Direct at Exhibit 3.

UEC presented conflicting viewpoints of the hydrologic properties of the Northwest Fault, and, at worst, UEC intentionally misrepresented the Northwest Fault as a single, sealing fault. UEC relied on the results of a 4-hour pump test. During discovery, Goliad County learned of a 24-hour pump test, also conducted by UEC, in June 2008. Importantly, the ED staff engineer, Mr. Murry, after reviewing the 24-hour pump test, testified in an unqualified fashion that there was “hydraulic communication” across the fault.¹³

Evidence contained in the 24-hour pump test was withheld from the TCEQ. TCEQ regulations aim to prevent such omissions. The Texas Administrative Code, 30 T.A.C. § 305.125(19), explicitly states that “[w]here the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application, or in any report to the executive director, it shall promptly submit such facts or information.” Mr. Murry testified that “if [UEC] come[s] across information that is contrary to what they submit in the application they are obligated to tell [the TCEQ].” UEC did not provide the TCEQ with the new, contrary information. UEC did not even provide the results to TCEQ during discovery. In fact, UEC merely listed the pump test results in its 5th Supplemental Response to Request for Disclosures as available upon request by any party, but to the knowledge of Goliad County did not provide the actual results. UEC filed its 5th Supplemental response over one and a half years *after* conducting the 24-hour pump test. As the ALJ explained in the PFD, “[Mr. Murry] could not explain why the test had not been provided to him by UEC, particularly in light of a rule that obligated UEC to provide contradictory evidence.”¹⁴ UEC provided the results to Protestants only after making a specific request.

¹³ PFD at 55.

¹⁴ PFD at 56.

According to UEC, “the specific goals of the pump tests [along the Northwest Fault] were to see whether there [was] hydraulic communication across the fault both laterally ... and/or vertically....”¹⁵ UEC heavily relied on these tests in its case in chief. For example, Dr. Bennett, UEC’s hydrogeologist, relied extensively on the results from a 4-hour pump test for his opinion that migration of mining fluids vertically across the fault will not occur. Consider the following unequivocal testimony from Dr. Bennett:

Q: Will fluids migrate vertically along faults in the Mine Permit Area?

A: No. There is no evidence suggesting there is present-day movement of fluids along the faults mapped in the Mine Permit Area, and there is substantial data refuting this suggestion. While these faults may have transported fluids in the geologic past, all evidence today suggests these faults are sealed, and in fact may have lower permeability than the surrounding formations. UEC conducted the NW Fault Pump Tests very close to the Northwest Fault. Pump tests are a well established method for interrogating the subsurface environment for regions of low or high permeability, *and they are effective for detecting a leaking or sealing fault*. During the NW Fault Pump Tests, when a well on one side of the fault was pumped, there was no response at all in the observation well located in the same sand but on the opposite side of the fault...”¹⁶

When making this claim, Dr. Bennett was only relying upon a “four-hour pump test that was originally provided as part of the federal case.”¹⁷ During cross examination, Dr. Bennett testified that he had never seen the 24-hour pump test conducted at the Northwest Fault. On the other hand, UEC witness Mr. Holmes was simultaneously relying on the 24-hour pump test for his testimony. This 24-hour pump test is the same pump test that the ED opined showed transmissivity at the Northwest Fault.¹⁸

Without question, UEC’s failure to supply Dr. Bennett with the 24-hour pump test results undermines Dr. Bennett’s testimony that the Northwest Fault is sealing. He never looked at this key data, data which the ED testified showed transmissivity. At hearing, Dr. Bennett conceded

¹⁵ UEC Exhibit 6, Holmes Pre-filed Direct at 65:22 – 66:1.

¹⁶ UEC Exhibit 10, Bennett Pre-filed Direct at 37:7 – 19 (emphasis added).

¹⁷ 4 TR. 917:14 – 918:1 (Bennett).

¹⁸ PFD at 56.

that the 24-hour pump test is “certainly data that I would want to evaluate” and he “wish[ed] he could work with the data a little bit more.”¹⁹

Despite the uncertainty surrounding the transmissivity of the Northwest Fault, the Commission proceeded to approve the Mine Permit Application and PAA-1 Application. In doing so, the Commission violated Chapter 27 of the Texas Well Injection Act, which, as stated above, explicitly states, “the Commission may grant an application in whole or part and may issue the permit *if it finds that, with proper safeguards, both ground and surface fresh water can be adequately protected from pollution.*”²⁰

B. The Northwest Fault is more complex than a simple, single fault, causing undue risk of vertically or horizontal injection fluid migration and creating a circumstance that may pollute fresh water.

The ALJ appropriately considered the importance of the Northwest Fault’s transmissivity, a consideration which led to the ALJ’s recommendation to deny the permits or conduct an additional hearing. Equally important, however, and underestimated by the ALJ, is the location, width, and stratigraphy associated with the “fault system”. Importantly, these factors also influence whether migration of contaminants into underground sources of drinking water will occur.

Again, the ALJ expressed that the Commission’s rules are designed to “*prevent* any underground injection that *may pollute* fresh water”, and that circumstances causing pollution would be grounds for permit denial. The ALJ appeared to agree with Goliad County that “[the] assertion that more information is needed to precisely locate the fault, is undoubtedly true.”²¹ Yet, the ALJ and Commission have failed to adequately consider the complexity of the

¹⁹ 4 TR. 913:20 – 25 (Bennett).

²⁰ TEX. WATER CODE § 27.051(a)(3) (emphasis added).

²¹ PFD at 53.

Northwest Fault, which also contributes to the risk of injection fluids migrating both vertically and horizontally.

Specifically, UEC represented on its maps and cross-sections submitted to the TCEQ in its Mine Application that the Northwest Fault is a single fault.²² UEC witness Craig Holmes ultimately conceded in his rebuttal testimony that “in the text of the [In-Situ] Application...UEC indicated that the Northwest Fault likely has more than one offset.”²³ At hearing, Craig Holmes referred to the fault more generally as the “Northwest Fault System.”²⁴

Furthermore, UEC openly acknowledged during hearing that they had not characterized the Northwest Fault in great detail. Until UEC adequately characterizes the Northwest Fault system, UEC doesn’t even know whether it can feasibly mine at the proposed locations near the Northwest Fault. For example, UEC’s consultant and primary witness testified that “UEC will have to further delineate the NW Fault when it files its applications for PA-2, PA-3 and PA-4.”²⁵ Mr. Underdown, UEC’s Vice President of Production and the only UEC employee to testify at hearing, candidly testified that UEC had not even made an initial determination as to how UEC was going to mine the areas near the Northwest Fault.²⁶ Inability to mine any portion of the proposed areas could have a significant effect on the economic feasibility of the entire mining project. At this point, issuing a permit for a Class III injection well would be entirely premature.

The characteristics of the Northwest Fault indicate that there is nothing to prevent horizontal migration of contaminants into an underground source of drinking water (“USDW”). UEC also has no idea whether mining fluids will migrate vertically across the fault and contaminate an USDW. Accordingly, the ALJ concluded that there was not sufficient

²² 2 TR. 423:1 (Holmes).

²³ 2 TR. 423:1 – 4 (Holmes).

²⁴ 2 TR. 422:11 – 20 (Holmes).

²⁵ UEC Exhibit 7, Issue G, Holmes Rebuttal at 5:18 – 19.

²⁶ 1 TR. 199:6 – 202:17.

evidence to make the recommendation to the Commission that vertical or horizontal migration of mining fluids would not occur.²⁷ The Commission's position that the complexity of the Northwest Fault and whether mining can occur without damaging groundwater will be evaluated at a later date does not satisfy the necessary requirements for obtaining the currently requested larger Mine Permit.

C. UEC has inadequately characterized groundwater flow, also creating a circumstance that may pollute fresh water of the State.

The Applicant failed to adequately characterize the direction and speed of local groundwater flow at the proposed project site. The In-Situ Application states the local groundwater flow is to the southeast, and the flow rate is approximately 6.7 feet per year.²⁸ However, UEC's own witness, Van Kelley, offered pre-filed testimony entirely inconsistent and contrary to representations made in the In-Situ Application.

Mr. Kelley was hired by UEC solely to provide "expert testimony ... in the area of groundwater hydrogeology." Mr. Kelley testified that the "groundwater flow within the graben is generally to the east." Adding to the confusion, Mr. Kelley testified at hearing that the only two piezometric maps for Sand B that were included in the PAA Application indicate that some groundwater actually flows to the west in PA-1. In other words, the PAA Application indicates that the direction of groundwater flow in one part of the site is in the exact opposite direction testified to what Mr. Kelley opined in his pre-filed testimony and what he had concluded from his model. The piezometric maps in the PA-1 Application and Mr. Kelly's interpretation of them at the hearing also directly contradict the information UEC included in the Mine Application that the flow is to the southeast.

²⁷ PFD at 109.

²⁸ UEC Exhibit 6 at Holmes Exhibit 13, p. 6-14

Equally troubling, and indicative of various misrepresentations by UEC, Mr. Kelley had seen both maps prior to the hearing yet did not mention the western flow direction in his pre-filed testimony, nor did he depict it in his B Sand model. In short, there is contradictory testimony regarding the direction of groundwater flow; it is not adequately described as required by the rules; and Mr. Kelly's review of the available information is questionable.

There is similar inconsistency with regard to the speed of groundwater flow. The In-Situ Application stated that the flow rate is approximately 6.7 feet per year. Mr. Kelley, again, UEC's own hydrogeology expert, testified in rebuttal that the flow rate in Sand B is actually 19 feet per year. Neil Blandford, on behalf of the Goliad County Groundwater Conservation District, testified that the water is migrating at approximately 40 feet per year. Mr. Blandford's testimony went unchallenged. Thus, the speed that the water is migrating remains an open question.

To make informed decisions regarding the effects of a uranium mining operation on nearby domestic water sources, it is imperative the Commission be provided adequate and accurate information detailing the direction and rate of flow. UEC's representation of a southeasterly flow at 6.7 feet per year is very different from 19 feet or 40 feet per year. Until these two variables are adequately characterized, there can be no way of knowing how many nearby citizens are in jeopardy and how quickly contaminated water may migrate. This important fact cannot be overlooked. UEC did not meet its burden and again demonstrated that it is not capable of being adequately protective of the County's groundwater.

D. Applicant UEC did not meet its burden to detail the geologic structure of the local setting.

TCEQ Rule 30 T.A.C. § 331.122(2)(D) states that an in-situ application is to include "maps and cross-sections, *detailing the geologic structure of the local setting.*" Additionally,

TCEQ rule 30 T.A.C. § 331.122(2)(E) requires that an applicant provide a “generalized map and cross-sections illustrating the regional geologic setting.” Goliad County reads these rules to require sufficient detail to understand and consider the geologic risks and overall feasibility inherent in developing a mine site. Goliad County strongly urges that such detail is missing here. The TCEQ asked, in Issue G, whether the “application adequately characterize[s] and describe[s] the geology and hydrogeology in the proposed permit area, *including fault lines*, under the applicable rules.”²⁹ UEC has fallen far short of accurately and honestly characterizing the Northwest Fault System.

IV. BASELINE WATER QUALITY (Issue C)

Baseline water quality within the proposed Mine Permit area and the smaller PAA-1 permit area was an issue for these permitting proceedings. The TCEQ rules unambiguously mandate that “groundwater in the production zone within the production area must be restored when mining is complete.”³⁰ And, “restoration must be achieved for all values in the restoration table of all parameters.”³¹ Establishing an accurate baseline with representative samples is crucial because, after UEC completes mining and is gone, the baseline will be the water quality that Goliad County will be forced to live with.³² This, of course, assumes that UEC will even be successful in achieving restoration to baseline levels. Also, it is important to establish an accurate baseline water quality because water quality will decline significantly once mining occurs, which makes it imperative to know whether the operation will contaminate water that is naturally of poor quality or whether the operation will contaminate water currently usable or usable in the future for human consumption: as Mr. Holmes testified, at the time of cessation of

²⁹ TCEQ Interim Order, March 9, 2009 at p. 17 (Issue G).

³⁰ 30 T.A.C. § 331.107(a).

³¹ 30 T.A.C. 331.107(a).

³² 30 T.A.C. § 331.104(c).

mining, one would expect between 6 and 8 mg/L of uranium in the groundwater, which is well above the current levels and is absolutely unsafe for human consumption.³³

Goliad County discovered during the course of the hearing that UEC manipulated the baseline water quality data in multiple ways. UEC misrepresented baseline water quality at the Goliad site to reflect far higher levels of uranium and radium than naturally existed prior to UEC's presence at the site. For example, Goliad County proved at hearing that the regional baseline submitted by UEC is not an honest and accurate description of Goliad's water quality. This is in large part due to scientific evidence presented by Goliad County that demonstrated that UEC's own actions contaminated the aquifer prior to baseline sampling.

A. The Commission's recommendation to average all three rounds of water quality samples does not address the fundamental error that UEC's own actions contaminated the first two rounds of samples.

In the PFD, the ALJ agreed with one of the primary problems with the PAA-1 Application, and thus, the Mine Application, identified by Goliad County. The ALJ recognized that UEC failed to establish an accurate baseline for PAA-1.³⁴ The burden to adequately describe baseline conditions rested with UEC. UEC's failure is an independent basis for denial of the PAA-1 application. Specifically, the ALJ determined that the "PAA-1 Application fails to comply with the statutory and regulatory requirements for the baseline water quality table and the restoration table unless amended."³⁵ And, "UEC's proposal for restoration to baseline levels is too lenient."³⁶ The ALJ then recommended, which the Commission adopted, that the three rounds of sampling conducted by UEC must be averaged.

³³ 2 TR. 525:1 – 16 (Holmes).

³⁴ PFD at 128.

³⁵ PFD at 128.

³⁶ PFD at 36.

Goliad County agrees that the baseline water quality established by UEC did not represent the true baseline quality in violation of the law. However, Goliad County urges that the Commission's attempt to remedy the violation did not address the fundamental error: the first two rounds of water quality samples were tainted by UEC's exploration and well development activities. As a result, these first two rounds should not be included as part of the basis for establishing baseline water quality, only the third round. Therefore, the Commission has taken a step in the right direction, but did not go far enough to ensure that Goliad County will have its groundwater restored to *accurate* pre-mining conditions.

B. UEC misrepresented baseline conditions and inadequately and inaccurately characterized the restoration values for uranium and radium.

UEC did not collect representative samples from the production area in the B sand and, therefore, failed to create an acceptable restoration table as required by 30 T.A.C. § 331.107(a). Rules require that each permit or production area authorization shall contain a restoration table for all parameters in the suite established in accordance with the requirements of § 331.104(b).³⁷ The samples used for establishing a restoration table must be “independent and representative water samples ... collected from the baseline wells completed in the production zone within the production area.”³⁸ Specifically, “a minimum of five baseline wells, or one baseline well for every four acres of production area, whichever is greater, shall be completed in the production zone within the production area.”³⁹

Importantly, the original samples utilized in the PAA-1 Application were tainted by artificially elevated levels of uranium and radium caused by UEC's own exploration and well development activities. Furthermore, when characterizing the baseline water quality, UEC

³⁷ 30 T.A.C. § 331.107(a)(1).

³⁸ 30 T.A.C. § 331.104(a)(3).

³⁹ 30 T.A.C. § 331.104(c).

omitted water quality samples that were actually representative samples, and which demonstrated much better water quality within the proposed production area.

C. UEC's water quality data showed a drastic improvement in uranium levels by the third sampling.

In its application, UEC proposed uranium and radium baseline water quality at PAA-1 as 0.115 mg/L and 333.8 pCi/L, respectively.⁴⁰ UEC derived these numbers from samples taken from a combined eighteen wells: four Regional Baseline Wells ("RBLBs"), which were developed and sampled for purposes of establishing a regional baseline, but were also utilized in part to establish baseline water quality at the PAA-1 site; and 14 Pump Test Wells ("PTWs"), which were drilled for evaluating groundwater connectivity, but were also sampled for establishing background water quality within the PAA-1 site. Critically, two years after the sample data that was submitted in UEC's PAA Application, the same eighteen wells were sampled again—for a second and third time.⁴¹ The new sampling results from the subsequent rounds of testing illustrated a remarkable difference and substantial improvement in water quality that UEC never explained in its pre-filed direct or rebuttal testimony. Furthermore, UEC did not include the new data as part of its permit application.

When the RBLBs and the PTWs were sampled for the second time, the average uranium concentration had dropped from 0.115 mg/L down to 0.029 mg/L.⁴² The same eighteen wells were sampled for a third time four months later in 2009. Importantly, this final round of

⁴⁰ UEC Exhibit 6 at Holmes Exhibit 20, Table 5.4 (PA-1 Application).

⁴¹ Goliad County Exhibit 3, Sass Pre-filed at Exhibit – 12 (PTWs sample dates); Goliad County Exhibit 4, Darling Pre-filed at Exhibit 12 (RBLB sample dates).

The RBLBs were initially sampled on approximately July 12, 2007. PTWs 1 – 6 were sampled between April 29, 2008 and May 12, 2008. PTWs 7 – 13 were sampled between September 3, 2008 and September 9, 2008. PTW-14 was sampled on July 2, 2008. The RBLBs and the PTWs were sampled for the second time between July 14, 2009 and July 21, 2009, over a year after the samples used by UEC to establish the baseline proposed in the PAA Application.

⁴² Goliad County Cross-Examination Exhibit 1.

sampling detected an average uranium concentration of 0.005 mg/L, which is 23 times lower than the proposed baseline in the PAA-1 Application.⁴³ In the third round of sampling, all 18 wells detected a lower concentration than in the first round of sampling. UEC's Dr. Galloway acknowledged that this "is a significant change."⁴⁴ UEC's other witnesses, Dr. Erskine and Dr. Bennett, both acknowledged that these changes indicated a trend.⁴⁵ Unbelievably, this data, and the change in concentration, is discussed at no point in the pre-filed or rebuttal testimony of Dr. Galloway, Dr. Erskine, Dr. Bennett or Mr. Holmes.

Moreover, and an equally grave omission, UEC never provided any of this sampling data to the TCEQ as part of its applications—even though 30 T.A.C. § 305.125(19) indicates such data is to be submitted if relevant and contrary to prior representations. UEC never amended its restoration table in its PAA-1 Application to incorporate this data.

UEC withheld relevant information contrary to its position, and, even worse, the evidence suggests that these latter rounds of sampling are actually representative of baseline conditions and that the samples in the PAA Application were elevated by UEC.

D. In drilling exploration boreholes and developing wells for testing, UEC solubilized uranium and liberated trapped radium, causing elevated levels in the groundwater that are not accurate representations of the water quality.

Of all the information discovered during this hearing process, Goliad County is most concerned about UEC's failure to appreciate the sensitivity of uranium to oxygen being introduced into the subsurface—and what this means for how UEC should conduct its operations. All testifying experts agreed that, when oxygen is introduced into the subsurface and encounters ore-bearing sands, it will release uranium and radium into the groundwater.

⁴³ *Id.*

⁴⁴ 1 TR. 66:1 – 8 (Galloway).

⁴⁵ 1 TR. 140:4 – 9 (Erskine); 4 TR. 859:2 – 3 (Bennett).

Dr. Galloway, one of UEC's experts, explained that "when in reduced form, uranium will readily react with oxidants and thereby become oxidized. When uranium is oxidized, it becomes readily soluble.... Conversely, when in oxidized form, uranium will readily act with reductants and thereby become reduced. When uranium is reduced, it precipitates – in other words, it drops out of solution and into mineralized form."⁴⁶ Dr. Sass, a key expert for Goliad County, described this process in detail in his pre-filed testimony. In short, there is no disagreement about this chemical process. In fact, this is the process by which uranium is mined, a fact undoubtedly known to the mining applicant, UEC.⁴⁷

Both at hearing and in pre-filed testimony, extensive evidence was presented, demonstrating that actions taken by UEC introduced oxygen into the subsurface. The evidence showed that the oxygen thereby came into contact with the uranium ore and essentially initiated the in situ mining process on a smaller scale.⁴⁸ The evidence is compelling that UEC's actions caused reduced uranium to solubilize and artificially elevate uranium concentrations in the groundwater. This groundwater, with elevated soluble uranium levels, was then tested, and the results were included in the Application to set the Baseline Water Quality for the Restoration Table in its PAA-1 Application.

As time passed after the first sampling event, the soluble uranium encountered the natural reducing environment at the site⁴⁹ and re-precipitated back into mineral ore. As a result, when sampled for the third time in November of 2009, approximately two years after the first round of sampling, *all 18 wells* experienced a drastic decrease in uranium concentrations. Each well

⁴⁶ UEC Exhibit 1, Galloway Pre-filed Direct at 15:7 – 11.

⁴⁷ UEC Exhibit 6, Holmes Pre-filed Direct at 8:12 – 18.

⁴⁸ 7 TR. 1308:15 – 22 (Murry); 2 TR. 380:5 – 17 (Holmes); Goliad County Exhibit 3, Darling Pre-filed Exhibit 8; Goliad County Exhibit 3, Darling Pre-filed Exhibit 6 (Permit 123 Plugging Affidavit); 1 TR. 32:24 (Galloway).

⁴⁹ 1 TR. 30:17 – 20 (Galloway).

detected uranium concentrations well below the Environmental Protection Agency (“EPA”) maximum concentration limit (“MCL” or “drinking water standard”) of 0.03 mg/L.

Goliad County’s expert witness, Dr. Sass, argued that the uranium that had previously been liberated by the oxidation process was re-precipitated due to reducing conditions naturally occurring in the subsurface at the site.⁵⁰ In other words, the uranium was oxidized, came into solution and then, over time, was precipitated back out of the water. This process is well established science, and it is direct proof that the actions of UEC led to the initial high concentrations of uranium.

The explanation by Goliad County expert, Dr. Sass, is fully supported by the water quality data. Dr. Sass stated that the oxidation process requires an oxidizing agent, which can occur through the process of drilling exploration boreholes and the RBL wells, which includes jetting with an air hose. Dr. Sass opined that it was this activity that increased the uranium and radium levels in the test wells at the site. It is worth revisiting Goliad County Cross-Examination Exhibit 1 from the hearing.⁵¹ The decline in uranium concentration in the RBLBs and PTWs is uniform as seen below:

[See Table Below]

⁵⁰ 6 TR. 1144:3 – 9 (Sass).

⁵¹ Goliad County has electronically recreated Goliad County Cross-Examination Exhibit 1 and is incorporated herein as depicted.

| PTW | U-1 mg/l | U-2 mg/l | U-3 mg/l | Ra-1 pCi/l | Ra-2 pCi/l | Ra-3 pCi/l | 1st Sample | 2nd Sample | 3rd Sample |
|------------------------------|--------------------------|------------------------------|----------------------------|------------|------------|------------|------------|------------|------------|
| 1 | 0.032 | <0.003 | <0.003 | 17.0 | 38.0 | 16.0 | 4/29/08 | 7/14/09 | 11/16/09 |
| 2 | 0.009 | 0.014 | 0.004 | 17.0 | 17.0 | 10.0 | 4/29/08 | 7/15/09 | 11/10/09 |
| 3 | 0.009 | 0.03 | <0.003 | 38.0 | 36.0 | 38.0 | 5/8/08 | 7/16/09 | 11/16/09 |
| 4 | 0.059 | 0.09 | 0.004 | 196.0 | 217.0 | 213.0 | 5/8/08 | 7/16/09 | 11/10/09 |
| 5 | 0.005 | <0.0030 | <0.003 | 357.0 | 549.0 | 830.0 | 5/12/08 | 7/21/09 | 11/16/09 |
| 6 | 0.010 | <0.0030 | <0.003 | 202.0 | 253.0 | 253.0 | 5/12/08 | 7/20/09 | 11/10/09 |
| 7 | 0.804 | 0.010 | 0.005 | 1684.0 | 2000.0 | 1590.0 | 9/9/08 | 7/20/09 | 11/10/09 |
| 8 | 0.134 | 0.019 | 0.010 | 397.0 | 326.0 | 311.0 | 9/3/08 | 7/15/09 | 11/10/09 |
| 9 | 0.135 | 0.010 | <0.003 | 394.0 | 343.0 | 306.0 | 9/8/08 | 7/14/09 | 11/16/09 |
| 10 | 0.099 | 0.020 | <0.003 | 68.0 | 359.0 | 63.0 | 9/8/08 | 7/13/09 | 11/16/09 |
| 11 | 0.166 | 0.007 | 0.003 | 296.0 | 55.0 | 386.0 | 9/10/08 | 7/9/09 | 11/16/09 |
| 12 | 0.163 | 0.07 | 0.003 | 477.0 | 345.0 | 392.0 | 9/9/08 | 7/16/09 | 11/10/09 |
| 13 | 0.156 | 0.0160 | 0.006 | 10.0 | 324.0 | 208.0 | 9/9/08 | 7/20/09 | 11/16/09 |
| 14 | 0.086 | 0.005 | 0.007 | 224 | 198.0 | 157.0 | 7/2/08 | 7/15/09 | 11/10/09 |
| RBLB | | | | | | | | | |
| 1 | 0.062 | 0.07 | 0.013 | | | | | | |
| 3 | 0.080 | 0.150 | 0.008 | | | | | | |
| 4 | 0.006 | 0.004 | <0.003 | | | | | | |
| 5 | 0.060 | 0.005 | 0.003 | | | | | | |
| AVERAGE | 0.115 | 0.029 | 0.005 | | | | | | |
| RANGE OF U VALUES | 0.009 - 0.804 | <0.0030- 0.150 | <0.003- 0.01 | | | | | | |

Notably, Mr. Murry from the TCEQ also testified that the numbers had changed from Round 1 to Round 2 and Round 3.⁵² Mr. Murry did not evaluate the new data because UEC did not submit it to the agency. It was instead provided during discovery,⁵³ further revealing the failure of UEC to timely provide new information to the TCEQ staff. Importantly, because this information was not provided to Mr. Murry, he was unable to consider it in his permit review.⁵⁴

In his pre-filed direct testimony, UEC expert Dr. Phil Bennett opined that the uranium levels in the RBLs “are naturally derived contaminants in the water that occur when groundwater under natural gradient flows into the mineralized areas and comes into contact with the uranium

⁵² 7 TR. 1316:21 – 23 (Murry).

⁵³ 7 TR. 1313:1 – 4 (Murry).

⁵⁴ 7 TR. 1312:21 – 24 (Murry).

minerals that are in place there.”⁵⁵ A couple of months after submitting this testimony, Dr. Bennett was confronted with a second and third round of sampling data showing a drastic decline across the board. The question arose, if the first round were naturally occurring levels of uranium, how could later rounds show a uniform drastic decrease? Nowhere in his pre-filed or rebuttal testimony does he explain the inconsistency. When questioned at hearing about the subsequent data, Dr. Bennett simply answered, “I believe I had received [rounds two and three before my rebuttal], but again, *I have not had a chance to look at it.*”⁵⁶ It is disconcerting that UEC’s hired geochemist, responsible for opining on groundwater quality, failed to look at subsequent data that contradicts evidence in his prior testimony. Regardless, the test data is clear that significant differences exist between the first and third round of testing.

1. UEC introduced oxygen into the subsurface by jetting the RBL wells

Goliad County explained the reason behind the significant decrease in uranium concentration at the sampled water wells, namely, UEC caused them when drilling exploration boreholes and developing wells for sampling water quality. According to Goliad County’s pre-filed testimony as well as testimony from the hearing, several pathways were formed by which oxygen was introduced into the baseline wells at the location of the uranium ore-bearing sands, prior to the wells being tested. For example, Mr. Murry, the TCEQ permit engineer, explained that prior to sampling water quality, “an air line is lowered into the casing, and the well screen is jetted with air to remove any scale or mud from the screen.”⁵⁷ Logically, injection of air (which contains oxygen) will solubilize any uranium it comes into contact with. At the hearing, Mr. Underdown, an UEC employee, testified that UEC “ran a 1-inch polyethylene line down to

⁵⁵ UEC Exhibit 10, Bennett Pre-filed Direct at 33:13 -15.

⁵⁶ 4 TR. 838:1 – 8 (Bennett)(emphasis added).

⁵⁷ Executive Director’s Exhibit 1, Exhibit 17 – Response to Comments, Response 18 (Murry).

about probably 90 feet below surface” for purposes of air jetting the wells.⁵⁸ The evidence also showed that Harry Anthony, Mr. Underdown’s boss, sent a memo regarding the most efficient way to accomplish jetting.⁵⁹

Regardless of the depth of the air hose, if the purpose of jetting is to “remove any scale ore mud from the screen,”⁶⁰ then air must reach the screen, which is the location of withdrawal of the test water and is also the location of the uranium. Mr. Murry explicitly testified: “Air would have been introduced at the screen level.”⁶¹

At his deposition, even UEC expert Craig Holmes testified in no uncertain terms that jetting the well would increase the concentration of uranium detected in a sample from that well. When asked if human activities could have caused more of that uranium to be released, Mr. Holmes testified under oath, “there could be when you’re developing a well, completing a well, especially for the first set. There are completion activities going on the cleaning up the well ... and that’s different from later sampling because the wells have been in existence for some time. ... There’s no further development ... of the wells such as jetting.”⁶² Craig Holmes clearly acknowledged that contamination could have been caused “especially for the first set [of sampling]”.⁶³

This is exactly what happened when UEC developed its wells at the proposed project site. Oxygen was introduced, and the uranium concentration detected in a sample well increased.

⁵⁸ 1 TR. 216:6 – 14 (Underdown).

⁵⁹ GCGCD Cross-Examination Exhibit 1 (Harry Anthony email).

⁶⁰ Executive Director’s Exhibit 1, Exhibit 17 – Response to Comments, Response 18 (Murry) (emphasis added).

⁶¹ 7 TR. 1308:15 – 22 (Murry).

⁶² 2 TR. 380:5 – 17 (Holmes).

⁶³ *Id.*

2. UEC caused elevated radium levels in the RBL wells and in the aquifer

UEC's actions caused not only increased concentrations of uranium, but also increased concentrations of the radium. As Dr. Sass testified, "when uranium becomes soluble, any decay products such as radium are freed from the ore body and, therefore, become soluble. Thus, radium can enter groundwater by dissolution of uranium ore."⁶⁴ UEC's own witness agreed with this process. In his pre-filed rebuttal testimony, UEC witness Dr. Erskine stated, "some of the radium-226 does remain trapped within the crystal structure and it may in fact be liberated as the result of ore being solubilized through oxidation."⁶⁵ On cross-examination, Dr. Erskine again agreed that, "if uranium ore is oxidized, whether artificially or intentionally, ... it will release trapped radium."⁶⁶

Goliad County did not quantify the amount of radium that was released as a result of UEC's actions because as Dr. Sass stated in his pre-filed testimony, "unlike uranium, radium remains in solution and does not precipitate back out."⁶⁷ In other words, because radium is not redox sensitive, the radium will not reduce back towards its natural levels as it encounters reductants. Therefore, Goliad County and the TCEQ cannot now know, and will never know, the true baseline levels of radium within the proposed permit boundary because of UEC's oxidizing activity prior to sampling. Even so, what is certain is that the radium levels suggested as regional baseline (and PAA-1 baseline) are inflated by the liberated radium.

The bottom line is that the third round of water sampling detected an average uranium concentration of 0.005 mg/L. For the foregoing reasons, the Commission's order to average

⁶⁴ Goliad County Exhibit 3, Sass Pre-filed Testimony at 10:10 – 12.

⁶⁵ at 10:10 – 12 (Erskine Prefiled Rebuttal).

⁶⁶ 1 TR. 144:4 – 9 (Erskine).

⁶⁷ Goliad County Exhibit 3, Sass Pre-filed Testimony at 10:16.

sampling rounds 1 and 2 with sample round 3 is inappropriate and does not represent the true baseline water quality. The Commission's order does nothing to address the artificially elevated levels of uranium and radium contained within the earlier sampling rounds. Curiously, at no point in the PFD does the ALJ offer analysis on the impacts of UEC's exploration and well development activities. UEC should not be rewarded for its duplicitous behavior, which has already jeopardized the sole source of drinking water in Goliad County. Accordingly, Goliad County respectfully urges this Commission grant this Motion for Rehearing in order to amend its prior decision and find that UEC failed to create a restoration table that reflects *representative* samples from the production area as required by 30 T.A.C. § 331.107(a)(1) and 30 T.A.C. § 331.104(a)(3).

**V. ALL ADDITIONAL ISSUES DESIGNATED BY TCEQ FOR APPLICATION
FOR PROPOSED CLASS III INJECTION WELL PERMIT NO. UR03075 AND
AQUIFER EXEMPTION**

Goliad County strongly urges the Commission to reconsider its prior determination and conclude that the Applicant failed to comply with the TCEQ rules for the following reasons:

- A. Whether the use and installation of the injection wells are in the public interest under Texas Water Code § 27.051(a). Pubic interest in regard to this issue includes whether UEC's mining operation or restoration will adversely impact the public interest by unreasonably reducing the amount of groundwater available for permitting by the Goliad County Groundwater Conservation District.**

The use of injection wells for in situ uranium mining in Goliad County is not in the public interest. The Commission focused too narrowly only on the alleged positive aspects of uranium development, without giving the appropriate weight to the negative aspects associated with mining.

1. The viability of nuclear power is unclear.

Specifically, the Commission determined that uranium should be developed to assist with the country's energy needs. The Commission determined "[i]t is in the public interest for this natural resource to be produced to meet the energy needs of the United States, and for the mineral owners to realize the economic benefits of uranium production on their property."⁶⁸ As an initial matter, this is an unreasonably unbalanced statement.

2. Energy needs should be balanced against water needs.

Moreover, water quality and quantity is an equally critical public interest issue in this part of the county. This should be balanced against the possibility of energy development (especially less-viable energy development, as is the case here). As most Texans know, water is an increasingly scarce resource as industry, municipalities and farmers are all among the competing users. In short, good clean water is at least as precious as viable energy.

The ALJ actually recognized this, in making a "caveat"—that if the Northwest fault is transmissive and the groundwater cannot be protected, then the mining is not in the public interest.⁶⁹ However, The proposed uranium mining will have an adverse impact on the groundwater within the proposed mining boundary regardless of the transmissivity of the Northwest Fault. The Commission, ALJ nor the ED adequately assessed the negatives associated with uranium mining when evaluating whether permitting UEC's requested operations was in the public interest as defined by TEX. WATER CODE § 27.051(a).

⁶⁸ PFD at 22.

⁶⁹ PFD at 23.

3. The ED, in making a public interest recommendation, did not consider the negative aspects of uranium mining.

Mr. Murry's testimony was at best ambiguous as to whether or not he considered negative impacts of in situ mining, and, at worst, his testimony exposes a complete failure by the ED to consider anything other than information submitted by UEC.

Specifically, Mr. Murry testified as follows:

Q: (by Mr. Blackburn). Now, did you consider the fact that there could be some negative aspects to the public interest?

A: (by Mr. Murry). No.

...

Q: (by Mr. Blackburn). So all you considered in your review were positive aspects provided by the applicant, correct?

A: (by Mr. Murry). Correct.⁷⁰

Mr. Murry unequivocally admits that he only considered what was included in UEC's application. Mr. Murry did later state that he "also considered the comments from the public and still came to the conclusion that [granting the application] was in the public interest."⁷¹ While these statements are difficult to reconcile, what is more important is that Mr. Murry testified that when determining whether the application was in the public interest he considered the negative comments from the public only in a "general way".⁷²

Taking the testimony in its entirety, it is clear that Mr. Murry did not balance the negative aspects of in situ mining against the positives—namely, he did not consider any contamination of groundwater. If Mr. Murry did consider the negative aspects of uranium mining, his testimony makes clear it was on a very limited basis. Without allocating appropriate weight to the negative

⁷⁰ 6 TR. 1233:21 – 1234:10 (Murry).

⁷¹ PFD at 23.

⁷² 6 TR. 1234:20 – 23 (Murry).

aspects, including but not limited to water contamination and consumption, compared to the alleged, but unproven job creation and energy supply, the ED cannot have made a valid public interest evaluation.

4. The proposed site at Goliad County contains clean water; other sites are better suited for mining because they do not contain clean water.

Importantly, Texas possess other uranium deposits that are located within aquifers where the water quality, unlike at the proposed mining site in Goliad County, is unsuitable for human consumption based on concentrations of lead, total dissolved solids and arsenic. The Commission did not appropriately consider these factors. The proposed mining will contaminate water that is of far better quality than being represented in the permit applications and was likely usable for human consumption prior to the presence of UEC. Perhaps more importantly, mining will contaminate groundwater that is fit for human consumption and could be used in the future as a source of drinking water.

Goliad County urges that clean, usable water is a natural resource that the state of Texas places an equal, if not higher, premium than uranium. The state of Texas has spent energy and legislative effort attempting to ensure water is a sustainable resource for Texans. It is not in the public interest of the State, and certainly not of the citizens of Goliad County, to sacrifice the groundwater (the sole source of available water in the area) for an undetermined amount of energy supply for an undetermined benefactor.

Accordingly, Goliad County respectfully requests that the Commission grant this Motion for Rehearing and amend its prior decision, denying the applications for a Class III injection well and corresponding PAA Application.

B. Does the Applicant's compliance history require denial of the application under Tex. Water Code § 27.051(e) and 30 T.A.C. Chapter 60?

Goliad County explained that UEC failed to plug exploration boreholes and regional baseline wells within the 48-hour requirement. As Dr. Darling testified, “[a condition] of Permit 123, Permit 123A and 123B is that ‘each borehole shall be plugged within seven days after drilling, unless an aquifer is encountered, in which case the exploration borehole shall be plugged within 48 hours after drilling.’ This requirement is taken directly from Title 16, Chapter 11, Section 11.138(4)(C).”⁷³ Dr. Darling further testified that “according to UEC’s plugging affidavits, 139 exploration boreholes were left open longer than 48 hours. A large number of exploration boreholes were left unplugged for a week or longer.”⁷⁴

The ALJ appears to have dismissed the numerous violations because allegedly, “the violations were promptly rectified to the satisfaction of the TRC; no enforcement orders were issued; and no penalties were assessed.”⁷⁵ However, this was speculative; no evidence was presented by UEC that corrective action was taken towards unplugged boreholes – some of which were reported to be open for multiple weeks. UEC did present some evidence responsive to the Notice of Violation issued by the Railroad Commission, but offered nothing to demonstrate reactive measures to the improperly plugged boreholes.

It also appears that the Commission has overlooked the 139 railroad commission regulatory violations merely because the Railroad Commission did not issue a formal notice of violation. However, it is unreasonable to dismiss UEC’s accountability for the vast number of violations simply because they went undiscovered by the Railroad Commission. As such, Goliad

⁷³ Goliad County Exhibit 4, Darling Pre-filed Testimony at 11:14 – 17.

⁷⁴ *Id.* at 11:25 – 27.

⁷⁵ PFD at 32.

County respectfully recommends that UEC's compliance history does require denial of the permit because of the extensive list of regulatory violations that impacted groundwater quality.

C. Does the application adequately and accurately describe baseline conditions of the groundwater in the proposed permitted area under applicable requirements of 30 T.A.C. Chapter 331?

With good reason, the Commission designated the issue of whether UEC adequately and accurately described the conditions of the groundwater in the proposed permitted area. Accurately establishing baseline conditions for the proposed mining area is crucial for evaluating whether a uranium operation should be permitted. The Commission needs to know the water quality in the area of proposed mining before it can make an informed decision about allowing that water to become contaminated. In fact, UEC adopted this approach in its Class III injection well permit application, arguing that the "Permit Area Water Quality" "has very poor water quality with respect to uranium and radium-226."⁷⁶ However, as described above, UEC misrepresented baseline water quality at the Goliad site to reflect far greater levels of uranium and radium than naturally existed prior to UEC's presence.

There are multiple problems that render UEC's description of baseline water quality inadequate and inaccurate. First, there is a problem with the location of the 20 RBL wells. Simply stated, they do not represent the "permit area" as required by 30 T.A.C. § 331.2(13). All twenty wells used for determining regional baseline water quality were located in the proposed production areas, which only encompass a combined 156.631 acres. The permit area is approximately 1,139 acres in size.⁷⁷ This small area accounts for just over ten percent of the entire permit boundary, but UEC represents in the In-Situ Application that this average is representative of the regional baseline water quality for the *entire* 1,139 acres at the proposed

⁷⁶ UEC Exhibit 6, Holmes Pre-filed Direct, Exhibit 13 at 5-16 (Mine Application).

⁷⁷ UEC Exhibit 6, Holmes Pre-filed Direct, Exhibit 3.

project site. Granting the permit applications based on the water quality samples submitted by UEC requires overlooking the true water quality of the remaining 90 percent of groundwater within the proposed mining boundary – all of which appears to fit for human consumption based on the water quality sampling results.

Second, as explained above, UEC introduced oxygen into the subsurface during exploration and well development activities. As a result, uranium was oxidized and solubilized into the groundwater, while simultaneously liberating trapped radium. That is, UEC's activities contributed to the elevated levels of uranium and radium.

Moreover, UEC calculated its "Permit Area Water Quality" for uranium by averaging the uranium concentrations from each of the 20 RBL wells. UEC calculated that the regional baseline for uranium concentration was 0.401 milligrams per liter ("mg/L") throughout the proposed permit boundary. UEC argues in its In-Situ Application that "the average uranium level is 13.4 times higher than the [drinking water] standard."⁷⁸ However, scratching just below the surface of UEC's 0.401 mg/L determination, it becomes clear that this average is extremely misrepresentative of actual groundwater conditions.

For example, one of those RBL wells detected 6.68 mg/l of uranium - approximately 23 *times* higher than the next highest detected level of all 20 RBLs. According to UEC's primary witness, Craig Holmes, the uranium concentration detected at RBLC-2 is a level that one would expect to see *post mining*. This measure is clearly an outlier and significantly misrepresented the true baseline conditions at the proposed permitted area.

Finally, Goliad County argues that a regional baseline is required to be established under 30 T.A.C. Chapter 331. "Establishment of Baseline and Restoration Values" is set forth in 30

⁷⁸ UEC Exhibit 6, Holmes Pre-filed Direct, Exhibit 13 at 5-16 (In-Situ Application).

T.A.C. § 331.104. As defined by 30 T.A.C. § 331.2(13), a “baseline well” is “a well from which groundwater is analyzed to define baseline quality in the *permit area* (regional baseline well).”

For the foregoing reasons, Goliad County strongly urges the Commission to grant this Motion for Rehearing and reconsider its previous finding that UEC did adequately and accurately describe baseline conditions of the groundwater in the proposed permitted area under applicable requirements of 30 T.A.C. Chapter 331 and deny the Class III injection well permit application.

D. Does the application meet all applicable criteria of 30 T.A.C. § 331.122, related to required consideration by the Commission prior to issuing a Class III Injection Well Area Permit?

Goliad County argued that the proposed injection wells and proposed production areas should be depicted in the application and not just the general mineral bearing sands. Goliad County further argued that the over 1,000 exploration boreholes that clearly meet the definition of a “well” should be depicted in the application for the TCEQ to consider in its review of the application. The Commission appears to have adopted the ALJ’s interpretation of 30 T.A.C. § 331.122 “as not requiring the exact location of every future injection well, or the locations of plugged boreholes.”⁷⁹ However, no statutory or legal basis was cited for this interpretation. On the other hand, as the rule reads, it clearly encompasses the location of “all wells” and “if production area authorizations are required ... the proposed production areas must be shown on a map.”⁸⁰

These violations show that the applicant has failed to meet fundamental requirements of the rules with regard to proposed production areas, production wells, artificial penetrations by exploration boreholes and faults, known or suspected. These specific problems are notable on

⁷⁹ PFD at 39.

⁸⁰ PFD at 38.

their own account and correlate with other deficiencies described in other sections, including containment of mining fluids and whether the application is protective of underground sources of drinking water. For these reasons, Goliad County strongly urges the Commission to grant this Motion for Rehearing and reconsider its previous findings on this issue.

E. Has the Applicant demonstrated that the proposed exempted aquifer meets the applicable criteria of 30 T.A.C. § 331.13?

Goliad County respectfully requests that the Commission as adopted an incorrect interpretation of the definition of “currently” used for purposes of obtaining an aquifer exemption. The Commission also failed to address the notion that the water within the requested exemption is likely suitable for human consumption, which means the water may at some point in the future be used as a source for human consumption. As Goliad County argued in its Closing Argument, 30 T.A.C. § 331.13(c)(2) requires an applicant to demonstrate that the aquifer, “until exempt status is removed ..., it will not in the future serve as a source drinking water for human consumption”. In other words, simply because there is commercial grade ore within a requested exemption, does not translate into an automatic satisfaction of 30 T.A.C. § 331.13. UEC failed to demonstrate that all water within the proposed exemption will not in the future serve as a source of drinking water. Even if the groundwater within UEC’s proposed exemption were proven to be indefinitely unusable due to commercial grade ore, UEC has requested an exemption for a size of the aquifer far greater than the represented commercial grade ore.

1. Groundwater within the proposed exemption currently serves or will serve in the future as a source of water for human consumption

Goliad County’s testimony by Dr. Clark, an expert geologist, that the definition of “currently serves” encompasses water wells hydrologically connected and down gradient from

the proposed aquifer exemption was supported by EPA documents. Specifically, the EPA stated, “the intent of the exemption of mineral, oil or geothermal producing portions of aquifers from designation as underground sources of drinking water is to allow current production in such aquifers to continue undisrupted by these regulations. *The exemption is not intended as a green light to exempt any aquifer or its portion which merely has the potential to be used in the future for production purposes.*”⁸¹ Two years later, the Agency did consider exempting aquifers for areas not yet producing minerals, but made very clear “[it] still wants to prevent the possibility of wholesale exemption of aquifers over large areas of the country simply because they are mineral bearing.”⁸²

The portion of the aquifer requested for exempt status is a part of the Evangeline Aquifer and currently serves as a source of drinking water to many. Mr. Holmes testified that the closest water wells used for domestic purposes are only 75 to 80 feet east of the requested exemption boundary.⁸³ The applicant’s own witness, Dr. Bennett, testified that the Braquet well, which is screened in the B-Sand approximately 75 to 80 feet east of the proposed exemption, is hydraulically connected back into the PA-1 mining area.⁸⁴

In addition to testimony regarding a hydraulic connection between the mining area and off-site water wells, Neil Blandford, the expert hydrologist presented by the GCGCD offered unchallenged testimony that “the water supply for these domestic wells is obtained from the portion of aquifer upgradient of the wells”⁸⁵ and that “based on the hydraulic properties of the Sand B aquifer, water within the proposed exemption zone will reach the Braquet wells within a

⁸¹ County Exhibit 1, Clark Pre-filed Testimony at Exhibit 30 (44 Tex. Reg. 78 (April 20, 1979) at 23743) (emphasis added).

⁸² County Exhibit 1, Clark Pre-filed Testimony at Exhibit 30 (46 Tex. Reg. 190 (October 1, 1981) at 46245).

⁸³ 2 TR. 310:23 – 25 (Holmes).

⁸⁴ 4 TR. 927:5 – 9 (Bennett).

⁸⁵ GCGCD Direct Exhibit 3, Blandford Pre-filed Testimony at 12:9 - 10.

period of 2 years.”⁸⁶ Even Mr. Murry, the witness for the Executive Director, agreed that a “well, one foot or even further away if we pump it, it can draw water from the exempted area or certainly eventually water from the exempted area will flow to that well.”⁸⁷ The pattern of movement of groundwater from the exempt area to off-site drinking water wells is well established.

Despite the TCEQ’s firm understanding that the Braquet well will ultimately produce water from the proposed exempted area, Mr. Murry’s ultimate conclusion regarding whether the exemption criteria was violated by this fact was simply “that’s not the way we look at it”⁸⁸ and that “it’s just basically based on physical location of the well.”⁸⁹ When asked on cross-examination where in the rules he bases his interpretation that water wells must physically be located within the proposed exemption, he answered, “that is not in the rules.”⁹⁰ It is simply absurd to think that the Safe Drinking Water Act was designed to allow for such clear manipulation such that a well located just one foot outside the requested exempted area, would be denied the protection of a federal law designed to protect underground sources of drinking water.

2. Applicant has not demonstrated water outside proposed production areas but within the proposed exemption is so contaminated that it would be economically or technologically impractical to render the water fit for human consumption

The only water quality data that the applicant has purported to gather was from the uranium-bearing zones from each of the specific sands. Furthermore, the water quality samples were specifically located in the areas with the heaviest uranium ore concentration. The applicant

⁸⁶ *Id.* at 12:11 – 14.

⁸⁷ 7 TR. 1367:4 – 10 (Murry).

⁸⁸ 7 TR. 1367:4 (Murry).

⁸⁹ 7 TR. 1367:13 – 17 (Murry).

⁹⁰ 7 TR. 115:18 – 19 (Murry).

has no water quality data from the majority of the proposed aquifer exemption area, which does not contain production-grade mineral deposits. Therefore, to the extent that the existing water quality data is proposed to be utilized in support of an aquifer exemption, it can only support an exemption for the mineralized portions of the various sands and not for the entire area shown in the application. The Commission does not address how UEC demonstrated the entire 423-acre exemption contains water that is unusable due to existence of commercial grade ore that only accounts for 140 acres. Similarly, with water quality data only from isolated locations and none from the majority of the requested acreage of the exemption, the Commission improperly concluded none of the water could be a future source for human consumption.

Accordingly, Goliad County respectfully requests the Commission to deny the request for an aquifer exemption for failing to satisfy the requirements of 30 T.A.C. § 331.13. At an absolute minimum, Goliad County strongly urges the Commission to grant this Motion for Rehearing and reconsider its previous findings on this issue.

3. All proposed aquifer exemptions must be delineated by a licensed professional geoscientist or a licensed professional engineer. 30 TEX. ADMIN. CODE § 305.49(a)(9)

Finally, 30 T.A.C. § 305.49(a)(9) requires that the aquifer exemption request contain “a complete delineation by a licensed professional geoscientist or a licensed professional engineer of any aquifer or portion of an aquifer for which exempt status is sought ...”. The testimony is clear that the section of the Mine Application addressing the aquifer exemption – Chapter 14 – was written by Craig Holmes.⁹¹ The map that is contained in the application delineating the aquifer exemption request, Figure 1-3, was created at the direction of Craig Holmes.⁹² This map was not sealed by a registered geoscientist or professional engineer. Mr. Holmes testified at

⁹¹ 2 TR. 329:1 – 4 (Holmes).

⁹² 2 TR. 296:11 – 12 (Holmes).

hearing, “I configured [the Alta Mesa] aquifer exemption boundary and I’ve worked with mining officials, you know, companies on aquifer exemption boundaries in the older days. But yeah, *the two that I would put more into my name* would be the Alta Mesa and UEC’s [Goliad Project exemption].”⁹³ The evidence in the record demonstrates that Mr. Holmes was responsible for determining and delineating the boundary for the aquifer exemption. Licensed geologists may have participated in the delineation, but the evidence clearly established the Mr. Holmes was the lead architect in determining the boundaries. Accordingly, the requested aquifer exemption is in violation of 30 T.A.C. § 305.49(a)(9). For the foregoing reasons, Goliad County strongly urges the Commission to grant this Motion for Rehearing and reconsider its previous finding that the proposed aquifer exemption area was properly delineated.

F. Is the application sufficiently protective of groundwater quality?

The ALJ concluded that until the issue of transmissivity of the Northwest Fault is resolved, the application may not be sufficiently protective of groundwater quality. The ALJ’s recommendation translates into a direct failure by the applicant to meet its burden of proof. As such, and for the reasons articulated in Section III of this brief regarding Issue G, Goliad County strongly urges that the Commission inappropriately dismissed the ALJ’s recommendation. Moreover, Goliad County urges the Commission grant this Motion for Rehearing and reconsider its previous finding and conclude that this application is not sufficiently protective of groundwater quality for the reasons articulated in Sections III. (Issue G), V.L. (Issue L), V.R. (Issue R) and V.T. (Issue T) of this brief.

⁹³ 2 TR. 299: 13 – 19 (Holmes); See also Holmes Depo. at 179:4 - 19.

G. Does the application adequately characterize and describe the geology and hydrology in the proposed permit area, including fault lines, under the applicable rules?

This issue is addressed in Section III of this brief.

H. Do the geologic and hydraulic properties of the proposed permit area indicate that the Applicant will be able to comply with rule requirements?

The ALJ concluded that until the issue of transmissivity of the Northwest Fault is resolved, the application may not be sufficiently protective of groundwater quality. The ALJ's recommendation translates into a direct failure by the applicant to meet its burden of proof. As explained in Section III of this brief, there is serious question as to the geologic and hydrologic properties of the Northwest Fault. The import of the unknown characteristics may be that the mineral deposits along the Northwest Fault may not be able to be mined in a manner that meets the monitoring requirement if not the requirement that mining fluid be contained. Until UEC sufficiently characterizes the "Northwest Fault System", it has no idea whether it will be able to confine mining solution as required by 30 T.A.C. § 331.102 or satisfy the monitoring requirements set forth in 30 T.A.C. § 331.103. For the reasons articulated throughout this brief, Goliad County respectfully requests that the Commission grant this Motion for Rehearing and reconsider its previous findings on this issue.

I. Does the Applicant meet the applicable requirements for financial assurance under Texas Water Code §§ 27.051, 27.073, and 30 T.A.C. Chapter 37 and 331?

Goliad County does not contest this issue at this time.

J. Is the application sufficiently protective of surface water quality?

The TCEQ designated as an issue for the Class III injection well whether the application is protective of surface water quality. The time to address these concerns is now. The

Commission needs all relevant information to make its decision regarding the entire project. Cross-sections A-A' and D''-D''' in the In-Situ Application make it clear that Sand A and Fifteen Mile Creek are at the same elevation in several places, and thus are connected.⁹⁴ This means that groundwater passing through Sand A, and down gradient from ore body in the A sand, re-enters the surface water system to the north in a short time and to the east in a somewhat longer time. The fact that the area is reducing does not translate into an absolute barrier for migration of harmful concentrations of uranium and radium. Post mining concentrations are estimated to be more than one hundred times as high as UEC's proposed background levels. Depending on the success of restoration, very high concentrations will remain for migration to 15 Mile Creek after sand A is mined. Just as the ALJ determined the geologic and hydrologic properties of the Northwest Fault must be determined now, so must the geologic and hydrologic properties of sand A and the 15 mile creek.

K. Are local roadways sufficient to handle traffic to and from the proposed facility?

Goliad County does not contest this issue at this time.

L. Whether UEC's proposal for restoration of groundwater to baseline levels as contained in the permit application is reasonable and adequate?

Of the 76 production area authorizations issued in Texas, an approximate 51 operators have applied for and received amendments to the originally established baseline water quality.⁹⁵ Dr. Bruce Darling, an expert for Goliad County, offered unchallenged testimony that the TCEQ records indicate that the agency has *never* denied an application for amended levels for restoration.⁹⁶

⁹⁴ UEC Exhibit 6, Holmes Pre-filed Testimony at Exhibit 13, Figures 6.11c and 6.8

⁹⁵ Goliad County Exhibit 4 at 21:27 – 29 (Darling pre-filed).

⁹⁶ Goliad County Exhibit 4 at 22:2 – 4 (Darling pre-filed).

The records show that amended restoration levels are major alleviations of clean-up obligations. For example, Dr. Darling's testimony identified the highest increase of cleanup standards for uranium was an 8,000 % increase.⁹⁷ The vast majority of the 51 amendments allotted for at least a doubling and tripling the amount of permitted contamination to be left in the groundwater.⁹⁸ The overwhelming evidence demonstrates that post mining water quality at that location will be significantly deteriorated. Goliad County has not overstated the facts. Goliad County's testimony was derived directly from TCEQ records, provided by Mr. Murry at an earlier date. The reality is 51 requests for amendments have been submitted to the TCEQ and 51 amendments have been granted. No evidence was presented to suggest UEC's mining operation would result any differently.

The Commission found that "UEC's restoration efforts will benefit from technological advancements." However, as Protestants argued at hearing, the Mine Application notes that the restoration technology "for restoring groundwater back to levels consistent with baseline involves using native *groundwater sweep* and *reverse osmosis*."⁹⁹ These proposed techniques for restoration are the exact same that have been used for more than twenty years.¹⁰⁰ Attachment A to Dr. Darling's report regarding amendments issued by the TCEQ clearly documents that Reverse Osmosis and Groundwater Sweep have continuously proven unsuccessful at restoring groundwater to baseline at other mining sites.¹⁰¹

Mr. Holmes and Mr. Underdown may have identified new methodologies of already existing technology, but even Mr. Murry of the TCEQ testified that "essentially, technology that

⁹⁷ Goliad County Exhibit 4, Darling Exhibit 13 at Attachment E, PAA Longoria-2.

⁹⁸ Goliad County Exhibit 4, Darling Exhibit 13 at Attachment E, generally.

⁹⁹ UEC Exhibit 6, Holmes Pre-filed Direct Testimony, Exhibit 13 at 12-1 (In-Situ Application) (emphasis added).

¹⁰⁰ Goliad County Exhibit 4, Darling Exhibit 13 at Attachment A, generally.

¹⁰¹ *Id.*

has been used in the past will be used in this Class III restoration activity.”¹⁰² Nowhere does the Mine Application or UEC’s testimony specify new technology that will prove more effective. Moreover, nowhere in the application and at no point during the hearing did UEC offer any evidence that newer methodologies have proven to have better restoration success.¹⁰³ Accordingly, there is no evidence to suggest the restoration efforts will prove any different at the Goliad County mining site. To make matters worse, Mr. Murry testified that once an amendment is issued, there is no longer a requirement to monitor groundwater quality or its migration pattern.¹⁰⁴ Unbelievably, all down gradient well users will be left completely in the dark as to the safety of the water.

For the foregoing reasons, Goliad County respectfully requests that the Commission grant this Motion for Rehearing and reconsider its previous findings on this issue.

M. Will the Applicant’s proposed activities negatively impact livestock and wildlife, including endangered species?

In Dr. Reagor’s testimony, he stated that he relied heavily on Craig Holmes and Bob Underdown helping him to understanding in-situ mining and the functioning of the mining plant. Dr. Reagor believes that there is no danger to livestock and wildlife based on the hypothetical that contamination will not occur because there won’t be a spill; and if there is, then it will be contained because of the design of the plant. Nowhere does he address the consequences if contamination actually results from a spill or if contaminated groundwater migrates off site. Dr. Reagor did not address the possibility of meat contamination or genetic mutations in either livestock or wildlife which affects both the beef as well as the replacement livestock producer.

¹⁰² 6 TR. 1243:12 - 19 (Murry).

¹⁰³ 2 TR: 412:1 – 17 (Holmes).

¹⁰⁴ 6 TR. 154:1 – 4 (Murry).

Dr. Reagor did testify, however, that the effect to cattle of consuming uranium “[is] primary to the kidneys ... then you’re going to get all kind of abdominal effects, affecting other organs.”¹⁰⁵

Moreover, in Mr. Murry’s testimony, he candidly acknowledged that he is not an agriculture person and that he did not take into account negative effects on cattle if radioactive contaminants were ingested.¹⁰⁶ Mr. Murry’s failure to address potential negative effects coupled with Dr. Reagor’s narrow evaluation exposes that UEC failed to prove that the proposed mining activities will not negatively impact livestock and wildlife. Although the cross-examination of Dr. Reagor was brief, it clearly exposed that his entire evaluation was premised on the guarantee that no contamination would occur. Unfortunately, that is not a guarantee as explained in more detail under Issue C and L.

N. Will the Applicant’s proposed activities negatively impact the use of property?

Goliad County does not contest this issue at this time.

O. Will the Applicant’s proposed activities adversely affect public health and welfare?

Goliad County does not contest this issue at this time.

P. Whether the proposed mining is in the recharge zone of the Gulf Coast Aquifer (Evangeline component)?

Goliad County does not contest this issue at this time.

Q. Whether the Gulf Coast Aquifer is a confined aquifer in the areas of Goliad County where UEC will conduct UIC activities?

Goliad County does not contest this issue at this time.

¹⁰⁵ 4 TR. 1029:7 – 15 (Reagor).

¹⁰⁶ 7 TR. 1298:4 – 21 (Murry).

R. Whether mining fluids will migrate vertically or horizontally and contaminate an USDW (underground source of drinking water)?

The ALJ recommended that until the issue of the transmissivity of the Northwest Fault is resolved, mining fluids may migrate vertically or horizontally and may contaminate a USDW.¹⁰⁷ UEC did not meet its burden of proof on this issue. Under the TCEQ and SOAH rules, an applicant must provide sufficient evidence to satisfy the issues designated by the Commission. Considering the evidence presented at hearing, the Commission does not know whether mining fluids will migrate horizontally or vertically across the fault. Similarly, Mr. Underdown, UEC's Vice President of Production and the only UEC employee to testify at hearing, candidly testified that UEC had not even made an initial determination as to how UEC was going to mine the areas near the Northwest Fault.¹⁰⁸

Furthermore, as explained in Sections IV. and V.L. of this brief, UEC will be unsuccessful in restoring groundwater quality to baseline conditions and will obtain an amendment to restoration levels. Mr. Murry testified that once an amendment is issued, there is no longer a requirement to monitor groundwater quality or its migration pattern.¹⁰⁹ In other words, the water quality will be significantly worse than baseline conditions and no monitoring will be in place to ensure safety for down gradient well users.

Despite the uncertainty surrounding the transmissivity of the Northwest Fault, the Commission proceeded to approve the Mine Permit Application and PAA-1 Application. In doing so, the Commission violated Chapter 27 of the Texas Well Injection Act, which, as stated above, explicitly states, "the Commission may grant an application in whole or part and may

¹⁰⁷ PFD at 109.

¹⁰⁸ 1 TR. 199:6 – 202:17.

¹⁰⁹ 6 TR. 154:1 – 4 (Murry).

issue the permit *if it finds that, with proper safeguards, both ground and surface fresh water can be adequately protected from pollution.*”¹¹⁰ Accordingly, Goliad County respectfully requests that the Commission grant this Motion for Rehearing and reconsider its previous findings on this issue.

S. Whether there are any USDWs within the injection zones proposed by UEC?

It is undisputed that USDWs exist within the injection zones proposed by UEC. The Commission’s Finding of Fact No. 170 notes “[t]here are USDWs within the injection zone proposed by UEC.” Similarly, the Commission’s Finding of Fact No. 171 states, “[e]ach of the four proposed production zones is a USDW.”

T. Whether any USDWs within Goliad County will be adversely impacted by UEC’s proposed in situ uranium operations?

The ALJ recommended that until the issue of the transmissivity of the Northwest Fault is resolved, the evidence suggests that USDWs within Goliad County outside the proposed aquifer exemption area may be adversely impacted by UEC’s proposed in situ uranium operations. Yet again, UEC failed to satisfy its burden of proof on an issue designated by the Commission. Goliad County hereby incorporates by reference Section III of this brief regarding the failure to adequately characterize and describe the geologic principles of the proposed mining site.

Record evidence also demonstrated that USDWs will be adversely impacted by UEC’s proposed mining operations regardless of the geologic and hydrologic properties of the Northwest Fault. UEC has requested an aquifer exemption for 423 acres. The vast majority of the water within that acreage has not been sampled by UEC. Water quality data obtained by UEC from the proposed production areas and area of review indicate the vast majority, if not all,

¹¹⁰ TEX. WATER CODE § 27.051(a)(3) (emphasis added).

of the water within the requested exemption is likely suitable for human consumption. Even water samples taken directly from the locations with the heaviest uranium concentrations suggest the water is suitable for human consumption with the exception of radium. However, as previously mentioned, there is no way of knowing the true baseline of radium concentrations due to UEC's exploration and well development activity.

Despite the relative good quality of this water, the Commission has approved UEC's aquifer exemption, which, if approved by the EPA, by definition, means this water will be authorized to be indefinitely contaminated. It has been established that the water quality within a production zone will be significantly worse than pre-mining conditions. It has been firmly established that restoration of the water post mining has been an overwhelming failure. As such, Goliad County knows that once the USDWs within the proposed mining boundary are contaminated with solubilized uranium, among other constituents, the damage is permanent.

Accordingly, Goliad County respectfully requests that the Commission grant this Motion for Rehearing and reconsider its previous findings on this issue.

U. Whether there is a “practical, economic and feasible alternative to an injection well reasonably available” within the meaning of that term as set forth in TWC § 27.051(d)(2)?

Goliad County does not contest this issue at this time.

**VI. APPLICATION FOR PROPOSED PRODUCTION AREA
AUTHORIZATION UR03075PAA1**

As explained in Section IV.A., Goliad County agreed with the ALJ's recommendation that UEC's proposed restoration table and Baseline Water Quality Table is too lenient. However, as argued above in Section IV.A., simply averaging the three rounds of water quality samples does not address the fundamental error with the proposed Restoration Table and

Baseline Water Quality Table. For those reasons, Goliad County respectfully requests that the Commission grant this Motion for Rehearing and reconsider its previous approval of the PAA-1 Application. The following sections address Goliad County's additional grounds for its Motion for Rehearing with regard to the PAA-1 Application.

A. Mine Plan

This issue was not contested by Goliad County.

B. Restoration Table and Baseline Water Quality Table

This issue is addressed in Section IV of this brief.

C. Control Parameter Upper Limits

Goliad County does not contest this issue at this time.

D. Monitor Wells

Mr. Blandford ran simulations for migration of contaminants at the project site and concluded that “there is extremely little chance, if any, that horizontal excursions will be detected at any of the Production Zone monitor wells during the period of active mining, let alone be detected in sufficient time to actually allow for remedial action to be implemented.”¹¹¹

Mr. Murry of the TCEQ agreed with Mr. Blandford's opinion that, at those flow rates, contaminants would not reach the monitor wells 400 feet away.¹¹² Mr. Murry also agreed that “if the monitoring is suspended, there would be no potential for detecting that movement until it reached a well off site.”¹¹³ The end result from UEC's proposed locations for monitor wells would be “that a large portion of the Production Zone aquifer between the Production Area and the

¹¹¹ *Id.* at 39:19 – 22.

¹¹² 7 TR. 1269:17 – 24 (Murry).

¹¹³ 7 TR. 1269:25 – 1270:3 (Murry).

monitor wells can be contaminated during the mining process, and there is no effective way to monitor whether this portion of the aquifer is restored to baseline conditions because there are no monitor wells in this interval. In fact, [Mr. Blandford] would expect that it will not be entirely restored, and the contaminated groundwater will continue to flow down gradient.”¹¹⁴ If UEC is going to have any ability to ensure control over contaminants, it is vital that the monitor well system be brought in closer than the maximum distance of 400 feet.

Pursuant to 30 T.A.C. § 331.103(a), “designated production zone monitor wells shall be spaced no greater than 400 feet from the production area, as determined by exploratory drilling.” The wording of the rule clearly indicates that the Commission maintains some discretion as to whether to accept the placement by an applicant. Accordingly, Goliad County respectfully requests that the Commission grant this Motion for Rehearing and reconsider its previous approval of monitor wells at a distance of 400 feet from the proposed production areas.

E. Cost Estimates for Aquifer Restoration and Well Plugging and Abandonment

Goliad County does not contest this issue at this time.

F. Other Information Required to Evaluate the Application

Goliad County does not contest this issue at this time.

VII. TRANSCRIPTION COSTS

Goliad County believes “the financial ability of the party to pay the costs” is an important consideration in determining that Goliad County should pay no costs of the transcript, or at most a very limited amount. Goliad County’s participation was on behalf of its citizens. As a governmental entity all costs are covered directly from tax dollars. Goliad County allocated a limited budget for hiring experts and legal counsel. Fortunately, Goliad County made this

¹¹⁴ GCGCD Exhibit3, Blandford Pre-filed Testimony at 40:8 – 10.

decision because without its participation, certain issues critical to the protection of its groundwater would never have come to light. Unfortunately, the contested case hearing exceeded anticipated costs and exhausted the appropriated funds. The ALJ improperly relied on the ability to hire legal counsel as an indication that the County has the financial ability to pay for the transcript. Goliad County's budget allocated for its participation pales in comparison to UEC's. Moreover, the now that the Commission has ordered to issue the Mine Application and PAA-1 Application, UEC stands to obtain a substantial financial benefit. Accordingly, Goliad County respectfully requests that the Commission grant this Motion for Rehearing and reconsider its previous finding and amend its Order to allocate 100% of the transcription costs to UEC.

VIII. CONCLUSION

For the reasons set out in this Motion for Rehearing, Goliad County recommends reopening the record and respectfully requests the Commission to reconsider its prior ruling to issue the Mining Application and the aquifer exemption request. As it is impossible to receive a PAA authorization without an in-situ permit, Goliad County urges the Commission take no action on the PAA-1 request or, if action is necessary, to deny the request.

Respectfully submitted,
BLACKBURN CARTER, P.C.

by: Adam Friedman

James B. Blackburn, Jr.

TBN 02388500

Mary W. Carter

TBN 03926300

Adam M. Friedman

TBN 24059783

4709 Austin Street


Houston, Texas 77004

713/524-1012

713/524-5165 (fax)

CERTIFICATE OF SERVICE

On this 29th day of March, 2011, a true and correct copy of the foregoing instrument was served on all attorneys and parties of record by the undersigned via regular U.S. Mail, and/or Certified Mail/Return Receipt Requested, and/or hand delivery, and/or facsimile transmission, and/or Federal Express Overnight Mail.


Adam M. Friedman

Richard R. Wilfong
Administrative Law Judge
State Office of Administrative Hearings
300 West 15th Street, Ste. 502
Austin, Texas 78701
Via Federal Express

FOR THE CHIEF CLERK:
LaDonna Castañuela, Chief Clerk
Office of the Chief Clerk - MC 105
Texas Commission on Environmental Quality
12100 Park 35 Circle
Austin, Texas 78701
Via Federal Express

FOR THE EXECUTIVE DIRECTOR:
Shana L. Horton, Staff Attorney
Texas Commission on Environmental Quality
Environmental Law Division, MC-173
P.O. Box 13087
Austin, Texas 78711-3087
Via U.S. First Class Mail

Don Redmond, Staff Attorney
Texas Commission on Environmental Quality
Environmental Law Division, MC-173
P.O. Box 13087
Austin, Texas 78711-3087
Via U.S. First Class Mail

FOR PUBLIC INTEREST COUNSEL:
Garrett Arthur, Jr., Staff Attorney
Texas Commission on Environmental Quality
Office of Public Interest Counsel, MC-175
P.O. Box 13087
Austin, Texas 78711-3087
Via U.S. First Class Mail

FOR THE APPLICANT:
Monica Jacobs
Kelly, Hart & Hallman, P.C.
301 Congress Ave., Ste. 2000
Austin, Texas 78701
Via U.S. First Class Mail

FOR GOLIAD COUNTY GROUNDWATER
CONSERVATION DISTRICT:
Rob Baiaamonte, County Attorney
Goliad County
P. O. Box 24
Goliad, Texas 77963
Via U.S. First Class Mail

GOLIAD COUNTY FARM BUREAU:
P.T. Calhoun
Goliad County Farm Bureau
P.O. Box 1369
Goliad, Texas 77963
Via U.S. First Class Mail

OTHERS:
Judge Harold Gleinser, County Judge
Goliad County Judge
P. O. Box 677
Goliad, Texas 77963
Via U.S. First Class Mail

Art Dohmann
4679 State Hwy. 119
Goliad, Texas 77963
Via U.S. First Class Mail